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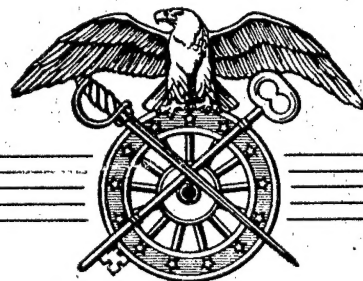
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CLOTHING ALMANAC NO. 18

SOUTHEAST ASIA

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Research and Development Division
Office of The Quartermaster General
December 1951

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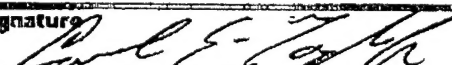
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Department of the Army
OFFICE OF THE QUARTERMASTER GENERAL
Research and Development Division

Environmental Protection Branch

Clothing Almanac No. 18

SOUTHEAST ASIA

(Thailand, Burma, French Indochina
and the Federation of Malaya)

Washington, D. C.

December 1951

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INTRODUCTION

1. PURPOSE

Clothing Almanacs show monthly requirements for items of military clothing to be used in a particular region. They are intended to aid logistic planners by indicating not only the most suitable military clothing for each month, but also the climatic and geographic conditions which make such clothing suitable. The tables can be used in planning clothing issue and seasonal clothing renovation, in scheduling warehouse operations to make maximum use of critical space, in estimating the probable amounts of use and wear of various items and consequent requirements for their replacement.

a. Distribution. The Almanacs are distributed for guidance to theater, Army, and other commanders responsible for authorizing the issue of discretionary items, and for information to commanders of posts, camps, stations, and divisions or equivalent organizations.

2. DESCRIPTION

Clothing Almanacs supplement T/A 21, which specifies total yearly clothing allowances for each of seven world-wide zones. Each T/A 21 Clothing Allowance Zone is based on the average temperatures of the coldest and warmest months, as shown in Table I. For each zone, T/A 21 lists the items that are required or mandatory. It also lists for each zone the items that are discretionary. (Discretionary items are not required by all personnel within the respective zones, but they are essential to the operating efficiency of certain personnel because of duty assignments which may involve greater exposure to environmental conditions.) Within the framework of T/A 21, Clothing Almanacs show monthly clothing requirements in specific regions, indicating essential items in these regions.

TABLE I: CLOTHING ALLOWANCE ZONES OF T/A 21

<u>Zone</u>	<u>Average Temperature (°F) of</u>	
	<u>Coldest Month</u>	<u>Warmest Month</u>
I Tropical	Above 68 . .	Above 68
II Semitropical	50 to 68 . .	Above 68
III Warm Temperate	32 to 50 . .	Above 68
IV Mild Temperate	32 to 50 . .	50 to 68
V Cool Temperate	Below 32 . .	Above 68
VI Cold Temperate	14 to 32 . .	50 to 68
VII Arctic	Below 14 . .	Below 68

a. Basis. Clothing Almanacs are based on a detailed study of local environmental conditions. Each Almanac specifies the clothing most likely to be needed by troops for adequate protection against these conditions, during round-the-clock operations. Of primary concern in preparing an Almanac is the amount and kind of clothing needed by a soldier in the field while his activity is relatively light. During strenuous activity, troops need less clothing; when completely at rest, they require more to remain comfortable. Clothing Almanacs show the items that will give troops adequate protection for at least 90 percent of the time, and in an average year any particular item can be expected to be used at least 30 percent of the time during the months specified.

b. Regions. Clothing Almanacs are issued for particular regions (e.g., Western Europe, Central Europe, Southwest Asia, etc.), which may include parts of two or more T/A 21 Clothing Allowance Zones. Each Clothing Almanac Region is further subdivided into a number of Clothing Requirement Areas, according to differences in monthly clothing requirements. Although all Clothing Requirement Areas within any one of the T/A 21 Clothing Allowance Zones have the same basic annual clothing allowances, they differ in monthly clothing needs.

(1) Clothing Requirement Areas are of two types, nonmountainous and mountainous. The latter are given a special designation to indicate that field conditions and, consequently, clothing requirements may change rapidly within a relatively short horizontal distance. The mountainous Areas are divided into elevation intervals, each of which has different clothing needs. Thus, in effect, each interval represents a Clothing Requirement Area and clothing needs of troops operating within mountains can be determined for any elevation.

(2) Each Clothing Requirement Area is assigned an identifying symbol. Nonmountainous Areas are designated by Roman numerals of the Clothing Zones in which they occur, together with an identifying letter (e.g., VI-A). Mountainous Areas are designated by the Roman numerals of the Clothing Allowance Zones of their lowest elevations, together with an identifying number (e.g., V-2). Although Clothing Requirement Areas in different Clothing Almanacs may have identical designations, they do not necessarily have the same environmental conditions or monthly clothing requirements. For example, monthly clothing requirements in Southeast Europe V-A are not the same as those in Southwest Asia V-A.

c. Map. Clothing Requirement Areas of the Region are shown on a map in the back of the Almanac. Distinctive boundaries separate Clothing Allowance Zones; single-line boundaries separate the individual Clothing Requirement Areas. Each Area is numbered according to the system outlined above.

d. Tables. For each Clothing Requirement Area or mountain elevation interval there is a table in the Clothing Almanac. Months are shown along the top, and the clothing items are listed on the left-hand side of the page. Need for an item is shown by a solid bar drawn opposite the item and in the proper month-column. The absence of such a bar means that the item is not needed in that month. For each mountain interval, elevations in feet above sea level are given at the top of the page.

e. New Items. All items listed in the clothing tables are authorized in T/A 21, Mobilization, 27 Jan 50, for the respective zones. As improvements are made, new items are standardized, which automatically replace the older ones in the tables as well as in requisitions. Upon standardization of completely new items, which are not simply improvements but are so different as not to be comparable to older items, special instructions for their use will be furnished in official Quartermaster publication.

f. Items Listed. In the tables, the clothing items have been grouped and arranged alphabetically under the headings of Body Clothing, Footgear, Handgear, Headgear, and Sleeping Equipment. For many items, model numbers, shade numbers, etc., have been eliminated to conserve space.

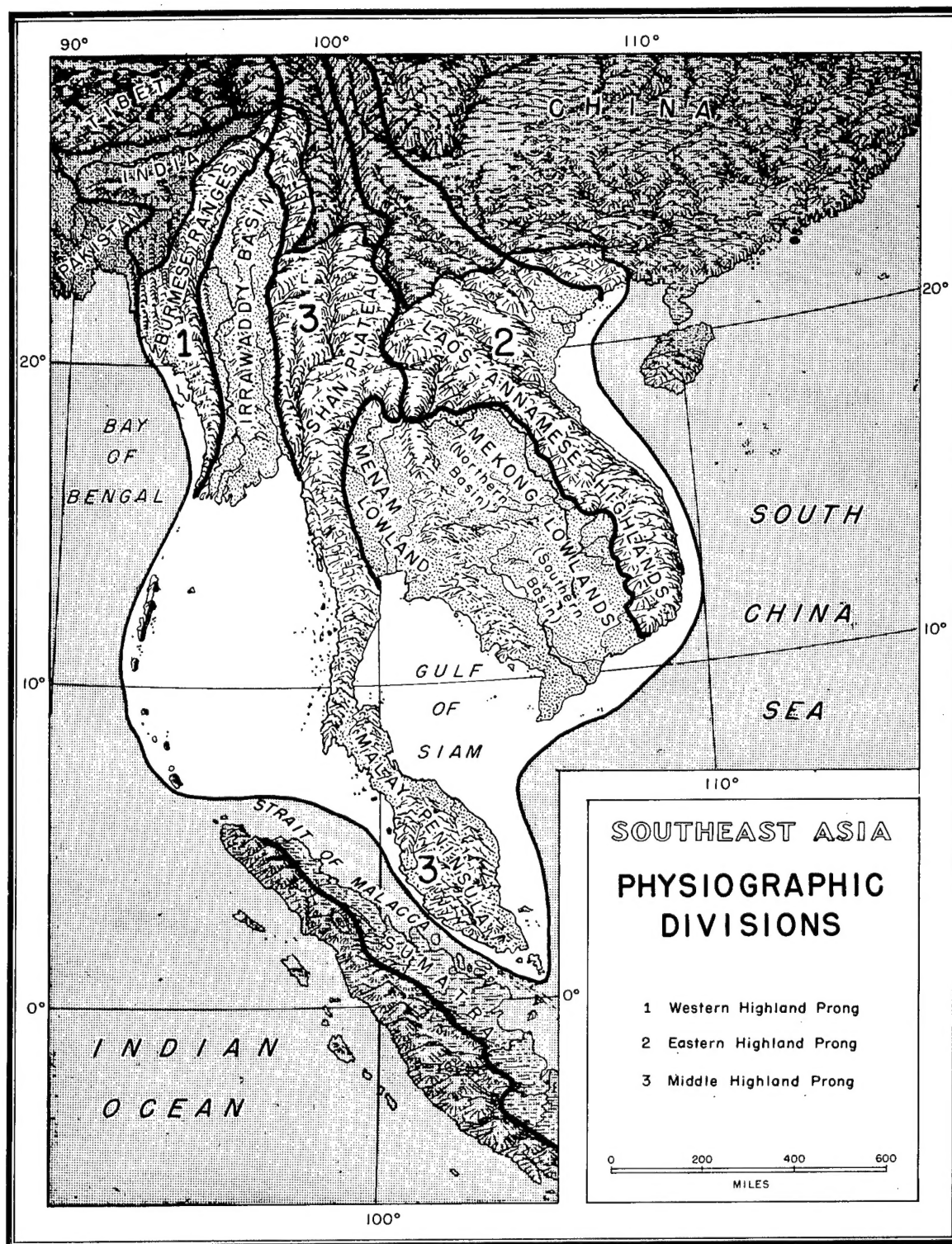
(1) Both discretionary and mandatory items are included in the tables. Discretionary items are indicated by an asterisk (*). In some mountainous areas, a few items are listed in accordance with T/A 21, Mbl, par. 3e, which provides that "in rugged terrain commanders may, at their discretion, authorize the allowance proper for the next colder zone than that in which the Area falls."

(2) No requirements are shown for specialized equipment, such as that for low-mountain and alpine areas, (T/A 21, Part III, Section II) which may be authorized by the commanding general, theater of operations, or by the Department of the Army for individuals, undergoing special training in continental United States. (Boots, ski-mountain are considered specialized).

(3) Certain items which are mandatory throughout the world, such as Drawers, cotton and Belt, waist are not included in the Clothing Requirements tables, but are included in summary tables.

(4) Also excluded are items in the nature of equipment rather than clothing; insignia, toilet articles, knives, snowshoes, tents, steel helmets, etc.

(5) Under the heading "Anti-Insect" need is indicated for: Gloves, mosquito, Headnet, mosquito, Bar, insect, field, and Repellent, insect.



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Figure 1: Terrain Divisions and Regions

CLOTHING ALMANAC FOR SOUTHEAST ASIA

1. GENERAL

Southeast Asia, including Thailand, Burma, French Indochina and the Federation of Malaya, is a tropical area in which the lightest Army clothing is required. In this respect the area is roughly similar to the Central American area lying between northern Mexico and Ecuador; it covers an area slightly larger than Mexico. In the lowlands, clothing requirements do not change with the seasons; in the mountains not only are changes of clothing required for different times of the year, but additional clothing is needed, reflecting the slightly cooler conditions of the uplands.

The terrain is dominated by three mountain prongs which extend southward from Yunnan and eastern Tibet. In the north these mountains, up to 15,000 feet high, are separated by narrow valleys which widen southward. Between the western and middle prongs lies the Irrawaddy River basin, and between the middle and eastern prongs lies the extensive lowland of the Menam and Mekong Rivers (Fig. 1).

The climate of Southeast Asia is that of the monsoon, in which warm, moist air moves over the mountains toward the interior of the continent during the warm season; and cool, dry air moves southward from the continent during the cool season. Thus the mountains receive considerable amounts of rain in summer, and all of the area, except for small parts almost completely dominated by their maritime environment, are dry during winter.

2. CLIMATE

Most of Southeast Asia has the high temperature and humidity characteristic of the humid tropics; seasons are distinguished by their raininess and the direction of the winds rather than by temperature changes.

a. Winds. The monsoon determines the climate. The summer monsoon season from May to September or November is the rainy period. Its onset varies by a few weeks from country to country, but by 15 June it is well established throughout Southeast Asia. Its disappearance occupies the period from September to November. The winter monsoon is the dry season, and includes a cool period (November-February) and a hot period (March-May). Average wind speeds of both the summer winter monsoons are generally between 10 and 14 miles an hour.

Typhoons are significant only along the east coast of Indochina which receives an average of four or five a year. Most occur in July or October. Damage by these typhoons is caused not only by the high winds of 75 miles per hour or more, but also by the high tides, surf and torrential rains which accompany them.

Land and sea breezes are important to comfort in coastal areas, particularly between the monsoons in October, March and April. In the mountains the local winds may vary considerably in direction from that of the general

monsoonal flow. For example, during the summer monsoon of northward blowing winds between July and October, the "Laos," a hot, dry wind, blows southeastward down the mountain valleys and across the coast of northern and central Indochina.

b. Temperature. Mean monthly temperatures are above 50° except in the high mountainous section of the north. In the north the temperature differences from winter to summer are large, characteristic of continental locations, but southward this range decreases until at stations on the Malay Peninsula there is practically no variation (Table II).

In Southeast Asia the difference between nighttime and daytime temperatures is generally greater than that between winter and summer; the higher the latitude the greater is the daily range. The average daily range in temperature at Singapore at all times of the year is about 13°, whereas farther north, especially during the dry season, it is much larger (Luang Prabang in March, 31°).

In Clothing Requirement Areas I-A and II-A, and the lower levels of Area I-1, mean monthly temperatures are always above 68° and usually above 75°. Highest mean monthly temperatures (83° to 90°) occur in April or May before the onset of the summer monsoon, the lowest (69°

Figure 2: The tall and serrated grasses, bamboo thickets, thorny bushes and jungle forest are likely to cause excessive wear and tear on clothing and footgear. Thorny bushes and poisonous plants may be irritating or painful. Protective clothing is essential.



to 79°) occur in January. Maximum temperatures above 90° may be expected practically every day from March through October. Mid-day temperatures above 100° are common in Area II-A during April and May. Even during the cool season, except along the east coast of Indochina and in the upper reaches of the Mekong River, mid-day temperatures are usually in the mid-eighties. Here, only the lightest weight Army clothing (warm weather) is needed.

In Area II-1, and above 3,000 feet in Area I-1, mean temperatures in the cool season are in the upper 50's and low 60's; warmer clothing (i.e., Shirt, flannel, od and Trousers, field, wool, od) is required. January is the coolest month. The hottest months are June, July, and August in Area II-1, and April or May in the higher elevations of Area I-1.

c. Rain. Annual rainfall varies from less than 30 to more than 200 inches, but averages between 60 and 100 inches. Definite wet and dry seasons (Table II) prevail, except in southern Malaya where the rainfall is more evenly distributed. Heaviest rains are associated with the period of the summer monsoon (May-November). This monsoon is preceded, in areas bordering the Bay of Bengal, by thunderstorms. Heaviest rainfall is recorded on the windward slopes of the mountains where it may exceed, by three to six times, the amount on the leeward slopes (Table II, Bangkok).

Although the time of the winter monsoon is the dry season for most of Southeast Asia, it is the time of the "Crachin" along the northeast coast of Indochina. This is a series of two- or three-day periods of overcast skies, heavy fog and drizzle which may be expected about one-third of the time between December and March.

Throughout Burma, Thailand, and Indochina the monthly rainfall distribution is very uneven (Table II). Variations from year to year are also considerable. During 35 years at Mandalay the driest year (1890) had 16.8 inches and the wettest (1894) 49.7 inches; at Saigon during 25 years the driest (1918) had 61.8 inches and the wettest (1908) 107.0 inches. At Singapore, however, near the equator, there is a relatively even monthly distribution of rainfall, due to its position in the belt of equatorial calms.

3. REGIONS

a. Western Highland Prong. The Burmese Ranges are complex mountains with peaks rising to over 10,000 feet. They trend southwestward into the Bay of Bengal and reappear far southward as the Andaman and Nicobar Islands. The lower slopes are covered by tropical rain forest, the middle altitudes by oak and pine, and the peaks largely by rhododendron. Few roads or trails and no railways cross these rugged mountains.

Above 3,500 feet, average temperatures during the five or six winter months are below 68°. Average summer temperatures are generally in the lower 80's. In the warmest months mid-day temperatures usually reach the

upper 90's, and during the coldest months night-time temperatures usually fall to the lower 50's. During summer (April to September) the western (windward) slopes are drenched with rain. Twelve to fifteen inches of rain for each of three or four summer months is not uncommon, and several almost rainless winter months are to be expected (Port Blair, Table II).

Appropriate clothing for the Burmese Ranges, in Clothing Requirement Area II-1, are shown in Table VI. About 5 percent of the area is more than 6,000 feet in elevation, 25 percent between 3,500 and 6,000 feet, and 70 percent below 3,500 feet.

b. Eastern Highland Prong. The Laos-Anamese Highlands extend more than 1,200 miles southward from Tibet, between the South China Seas and the valley of the Mekong (Fig. 1). In the north they are high, with peaks reaching elevations of 8,000 to 10,000 feet, but in the south they reach only 2,000 to 5,000 feet. Most of the area is forested, and has numerous steep-sided, narrow valleys. No railways cross the region, but there

TABLE II: AVERAGE TEMPERATURE (°F) AND RAINFALL (INCHES)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Akyab, Burma	70.0 0.0	72.8 0.1	78.5 0.4	83.3 2.0	84.1 13.9	82.2 46.9	80.8 54.8	80.8 45.1	81.9 22.5	81.8 10.9	77.8 5.4	71.9 0.7
Mandalay, Burma	70.6 0.0	75.7 0.0	83.2 0.1	89.8 1.1	89.4 5.8	86.7 5.5	86.6 3.2	85.6 4.5	85.1 5.7	83.4 4.7	77.8 1.6	71.4 0.4
Lashio, Burma	60.1 0.2	63.6 0.4	70.4 0.4	75.7 2.2	76.8 6.9	76.8 10.2	76.2 11.6	75.8 12.7	75.8 7.8	72.9 5.5	66.4 2.9	60.8 0.7
Rangoon, Burma	76.8 0.0	79.4 0.2	83.6 0.3	87.0 1.6	84.4 12.4	81.4 18.0	80.6 21.1	80.4 19.5	81.0 15.6	81.7 6.9	80.1 2.4	77.2 0.1
Port Blair, Andaman I.	80.8 1.6	81.3 0.9	83.3 0.8	85.4 2.5	83.6 16.1	81.8 19.6	81.4 15.5	82.7 15.0	80.8 18.4	81.6 11.2	81.8 9.7	81.0 7.0
Bangkok, Thailand	77.4 0.3	80.2 0.8	83.6 1.4	84.9 2.3	84.8 7.8	83.6 6.3	82.7 6.3	82.6 6.9	81.8 12.0	81.0 8.1	78.9 2.6	76.7 0.2
Singapore, Singapore I.	79.8 9.8	80.4 6.6	81.3 7.4	81.6 7.6	82.0 6.6	81.6 6.8	81.4 6.7	81.2 7.9	81.2 6.7	81.2 8.0	80.7 9.9	79.8 10.5
Hanoi, Indochina	63.0 0.9	63.3 1.4	68.5 1.8	75.0 3.5	81.5 8.5	84.5 10.5	84.3 12.6	83.7 13.9	82.0 10.5	77.5 4.1	70.7 1.8	65.3 1.1
Luang Prabang, Indochina	69.0 0.7	74.0 0.5	78.5 1.2	82.3 4.4	84.3 5.9	84.0 6.3	82.8 9.0	82.2 12.1	82.5 6.5	79.8 3.2	74.7 1.2	70.0 0.3
Saigon, Indochina	79.2 0.6	81.0 0.1	83.5 0.6	85.5 1.6	84.2 8.3	82.0 13.3	81.2 12.1	81.5 11.1	81.3 13.5	81.0 11.0	80.0 4.4	78.8 2.4

are several highways and trails through the numerous mountain passes.

Mean monthly temperatures decrease northward as altitudes increase. During the warm season average mid-day temperatures reach the middle 90's; in the cool season the average night-time temperatures fall to the upper 50's (Table II).

These highlands are in Clothing Requirement Areas I-1 and II-1, requiring the clothing shown in Table V. In Area I-1 about one-half of the highlands are below 3,000 feet, about 40 to 45 percent between 3,500 and 6,000 feet, and not more than five percent above 6,000 feet. Table VI indicates the months at various elevation levels for which the different clothing groups are adapted.

c. Middle Highland Prong. These mountains, encompassing the Shan Plateau in the north and the Malay Peninsula in the south, extend southward from the east end of the towering Himalayas, for nearly 2,000 miles, almost to the equator. In the far north some peaks are nearly 20,000 feet high, but 90 percent of the area is below 5,000 feet. Four great rivers (Irrawaddy, Salween, Menam, and Mekong) flow through or flank the region. The natural vegetation varies from tropical rain forest in the Malay Peninsula to mixed hardwood forests and grasslands on the Shan Plateau (Fig. 2). Two roads, well-known to Americans in World War II, cross from Burma and India to China, namely, the Burma-China Road ("Burma Road"), and the Assam-China Road ("Ledo Road").

At Fraser's Hill (3° 43' N.) at an elevation of 4,272 feet, the average temperature is in the upper 60's for 10 months of the year, whereas at sea level, for every month except January, it is in the lower 80's (Singapore, Table II). At Lashio, far north on the Shan Plateau, at an elevation of 2,802 feet, summer temperatures are in the upper 70's, but winter average night-time temperatures fall to the upper 40's.

The region as a whole has the typical monsoon rainfall, which is unevenly distributed throughout the year (Lashio, Table II). In the extreme south (Fraser's Hill, 106 inches) rainfall is of the equatorial type, evenly distributed through the year.

The Middle Prong of the Southeast Asia Highlands is divided into three clothing requirement areas (Areas I-A, I-1 and II-1). Area I-A covers all of the region south of the Shan Plateau except a small rugged mountain section (Area I-1) in the southern Malay Peninsula. In Area I-1, in southern Malaya, not more than 20 percent of the land is above 3,000 feet, although some peaks rise to 7,000 feet. The southern edge of the Shan Plateau is also in Area I-1. Here, approximately 30 percent of the land lies above 3,000 feet in elevation. Of the three elevation belts in Area II-1, north of the 20th parallel, about 60 percent is below 3,500 feet, 30 percent between 3,500 and 6,000 feet, and less than 10 percent above 6,000 feet. Clothing items for combat troops operating at these levels are shown in Table VI. The mountains between 6°N and 18°N are so low that warm weather clothing may be used throughout the year, and they are included in the Clothing Requirement Area I-A.



Figure 3: Combat operations in the jungle result in severe wear and tear on the light, warm weather clothing. Traveling, as shown here, is rough on footgear, and movement through the forest, except along trails, is accomplished with utmost difficulty.

d. Irrawaddy Basin. The Irrawaddy Basin comprises the delta of the Irrawaddy and Sittang Rivers and adjacent foothills (Fig. 4). It extends for about 1,000 miles between the Burmese Ranges and the Shan Plateau (Fig. 1), and is 150 to 200 miles wide. Over the great delta of the Irrawaddy flow a maze of distributary streams. Rangoon is situated on the banks of one of these. Most of this basin is densely populated and covered with rice paddies. Numerous good highways intersect the basin, and the Irrawaddy and its chief tributary (Chindwin) are navigable for craft of shallow draft for about 600 miles.

This Basin lies in a protected position between the mountains. The annual rainfall is somewhat erratic, and the monthly distribution uneven (Table II). Temperatures at Rangoon and Mandalay are typical. Here, the warmest part of the year precedes the onset of the summer monsoon (April-May). Average mid-day temperatures reach 100° or more, and average night-time temperatures during the cool season, in the northern part of the basin, reach the lower 50's.

The Basin is divided into three Clothing Requirement Areas: I-A in the south, II-A in the center, and II-1 in the north. Only a small part (less than 10%) of Area II-1 rises above 3,500 feet. Tables IV and V indicate appropriate clothing groups for the Irrawaddy Basin and the months each is to be worn.

e. Menam and Mekong Lowlands. These two lowlands, between the Laos-Anamese Highland and the Shan-Malaya Highlands, are separated by the Cambodian Ranges (Fig. 1). The Dangrek Mountains separate the Mekong Lowlands into north and south basins. The south basin is in French Indochina; the north basin and the Menam Lowlands are in Thailand. Much of these lowlands are delta and alluvial plains of the Menam and Mekong and their tributaries (Fig. 5).

These lowlands lie entirely within Clothing Requirement Area I-A. Average monthly temperatures are in the upper 70's and lower 80's, and average night-time temperatures fall to the upper 60's or lower 70's. Rainfall is unevenly distributed. Warm weather clothing is appropriate throughout the year.

Figure 4: Warm, parched landscape of the Irrawaddy Basin near Mandalay. Warm weather clothing is suitable here throughout the year. Valleys, as much as 600 feet deep, impede travel. The even and barren landscape provides unimpeded visibility and makes camouflage difficult.



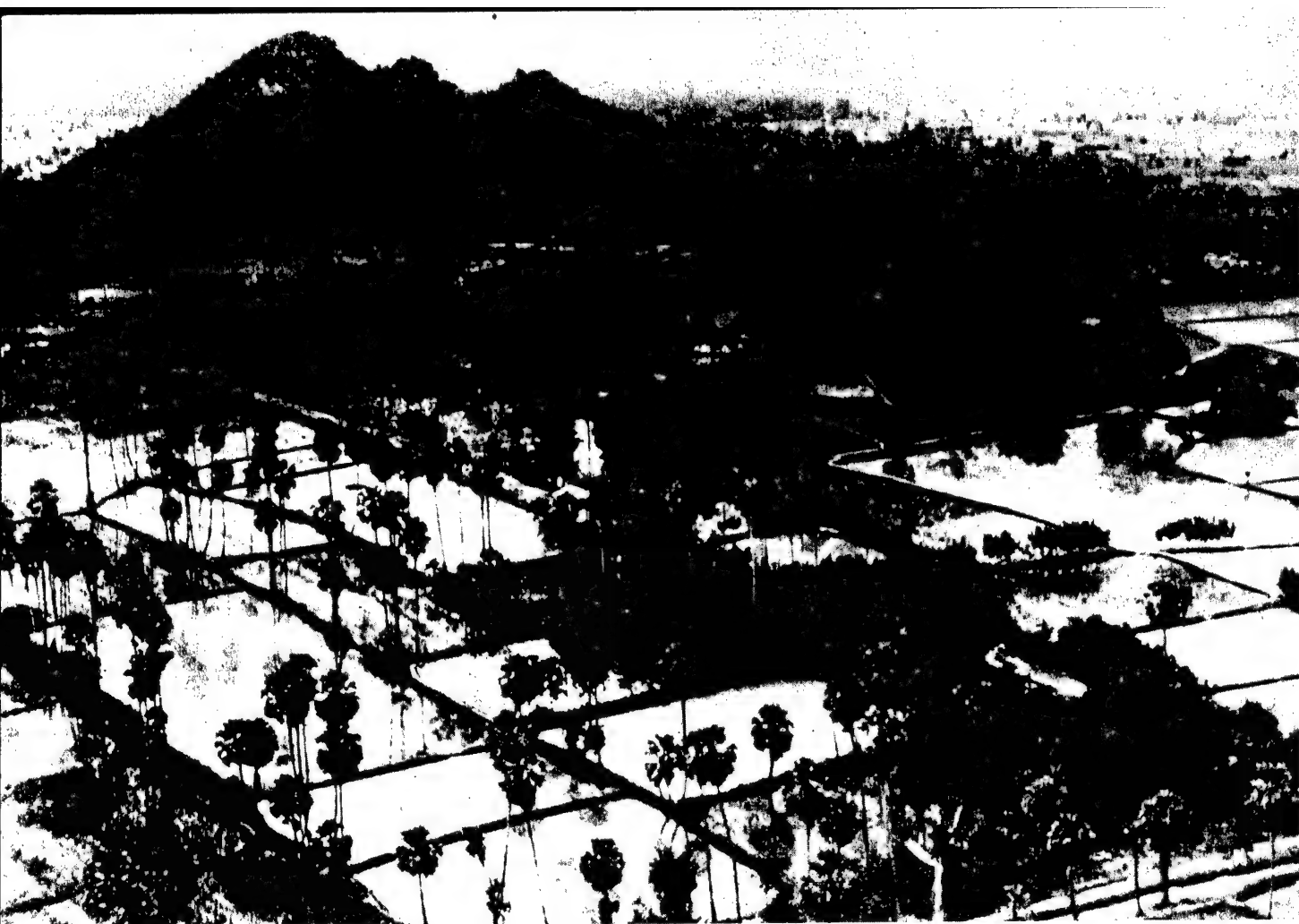


Figure 5: Rice fields, such as these in Thailand, account for large areas of wet ground. Footgear needs special attention in order that it be kept dry, flexible and comfortable. Mosquitoes are numerous.

4. ANIMALS AND PLANTS

a. Insects. The great variety of insects in Southeast Asia, many of which, as shown in Table III carry disease, impose important restrictions on the clothing of combat troops. Suitable protection, such as headnets, gloves, and repellents (Fig. 6) for exposed parts of the body should be available.

The dangers of mosquitoes to combat soldiers in Southeast Asia should not be underestimated; not only are they numerous and irritating but they carry malaria, filariasis, dengue, and possibly cholera. Favorable habitats for the breeding of dangerous species of mosquitoes, as indicated by the distribution of mosquito-borne disease, prevail in all parts of Southeast Asia. Malaria exists in both lowlands and highlands, but is most common in the foothill area. Blackwater fever, a severe type of malaria, is found in Laos, in upland sections of Malaya, in both north and south

TABLE III: SIGNIFICANT INSECTS OF SOUTHEAST ASIA

Insect	Disease Carried	Remarks
<u>Mosquitoes</u>		
Anopheles	Malaria	The severe type, blackwater fever, occurs in the upper part of the Black and Claire River Valleys in Northern Indochina
Aedes	Dengue	Could carry yellow fever
Culex	Filariasis	Mostly in cities
Mansonia	Filariasis	In swamps and jungles of Malaya
<u>Flies</u>		
Housefly	Dysentery, yaws	
Sand fly	Sand fly fever	Not infected in Indochina
Stable fly		Severe bites
Blow fly	Intestinal diseases and yaws	In Malaya
Midge fly		Severe bites, concentrated in Malaya
<u>Gnats</u>		
Eye gnats		Bites
Buffalo gnats		Bites
Mites	Scrub typhus	
<u>Lice</u>		
Body lice	Relapsing fever Epidemic typhus	
Ticks		Infectious sores
Bedbugs		Bites
Cockroaches	Mechanical vectors of disease	

Thailand and on the Shan Plateau of Burma. Dengue fever (six-day fever) occurs in the southern sections. Filariasis, a blood disease, occurs mostly in urban areas, and is most prevalent on flood plains and along the coast.

Sandflies are widely distributed in this part of Asia. They are extremely annoying, and are vectors of sand fly fever and Leishmaniasis. Other flies and gnats are noted for their ability to attack humans savagely, leaving severe bites which, under tropical conditions, may become infected. Both sand flies and gnats spread eye infections. Headnets (fine mesh) are useful, and the use of repellents and DDT are recommended.

Lice, fleas, tropical bedbugs and mites are common in Southeast Asia, and are vectors of Typhus, scrub typhus, relapsing fevers, and plague (Table III). The seams in clothing which overlap are favorable places for eggs and larvae of these pests. Delousing powder for both clothing and body is recommended.

b. Other Animals. Land leeches are prevalent on grasses and trees in jungle areas, especially during hot weather. These blood suckers cause lesions which may become infected. Boots and gloves furnish some protection.

Snakes, scorpions, centipedes, and lizards may be poisonous. Cobras, Vipers, Coral snakes, and Kraits, which are prevalent throughout Southeast Asia are extremely poisonous. Of these, the Cobras are known to attack

Figure 6: Insects are generally found under the eaves of houses or in other dark places, during daytime. Mosquito control practices, during the peak of the rainy season, are illustrated in the picture.



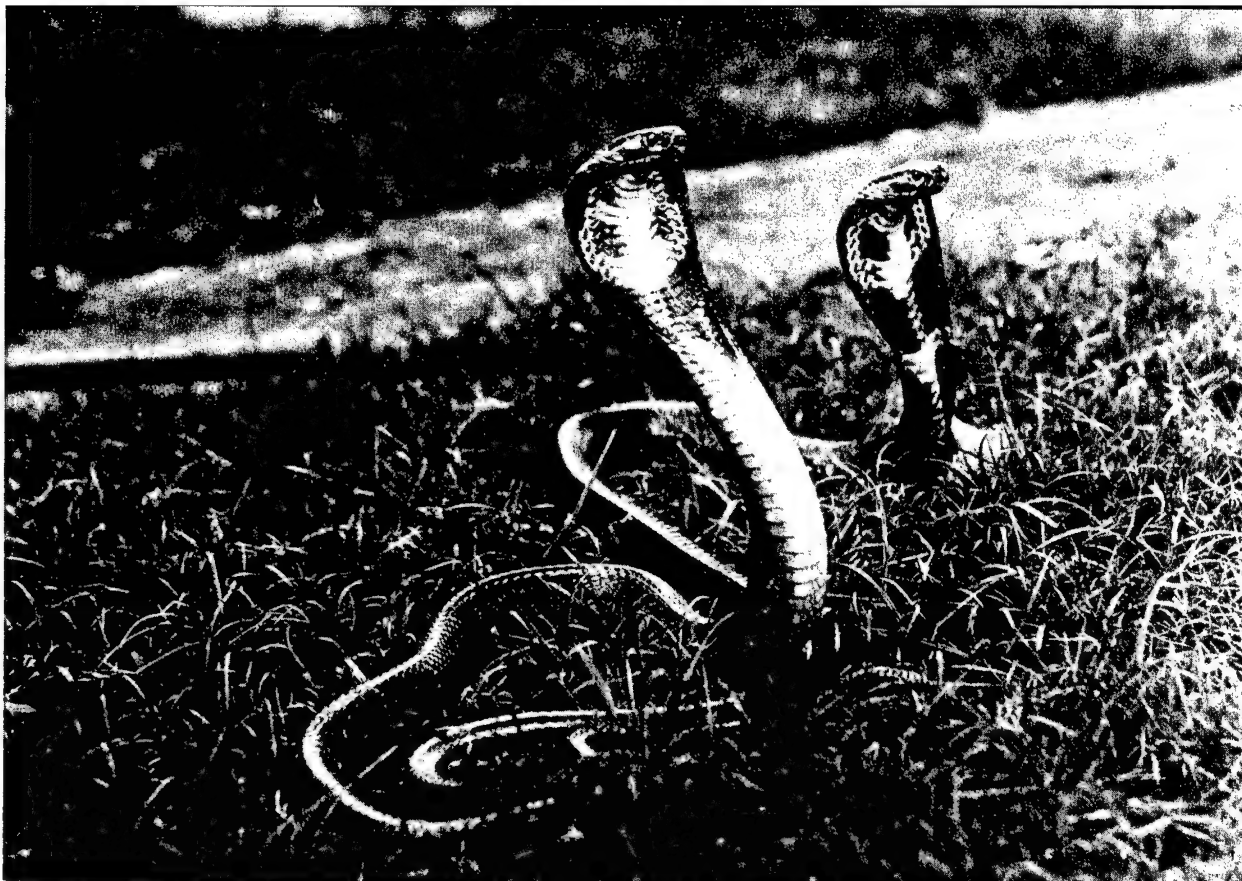


Figure 7: Hooded cobras may be found throughout Southeast Asia. They feed on rodents and thus may be expected near human dwellings and storage areas.

humans. They are fond of small rodents and, therefore, frequent areas of human habitation (Fig. 7). Long trousers and high boots or leggings provide good protection. A poisonous sea snake inhabits the brackish waters of the Malaya coast. The great pythons, similar to the American Boa, are nonpoisonous, but dangerous.

Numerous larger animals abound in the sparsely inhabited areas; some, like the elephant, rhinoceros, and panther, are rare. These animals together with tigers and leopards generally avoid contact with humans. Other animals like the Malay bear, monkeys, wild dogs and bamboo rats are pests, but are not dangerous. They may damage supplies of food and camp equipment, and impose a requirement for special conditions of storage. The wild boar, caribao, and the crocodile are natural hazards of the area and should be avoided.

c. Plants. Skin irritations and eruptions, from contact with certain plants, may result in serious casualties among combat soldiers operating in forests and jungles. Various types of poisonous plants, such as poison ivy and poison oak, grow in the region. These exude serious skin irritants, and care must be taken to keep the bare skin from contacting them. Microscopic fungus spores also a constant threat, thrive on continuously moist skin surfaces. Their growth may produce disabling effects.

Certain trees (Rengas family) exude a dark sap which produces blisters that spread and frequently become infected. When in danger areas, clothing

(gloves, long trousers, long sleeves, etc.) should be worn in such a manner as to avoid contacts with these offensive plants. A dangerous mangrove tree (buta-buta) exudes a sap which will produce blindness. Soldiers operating in mangrove areas should be made aware of this species of tree.

5. SUPPLEMENTARY ARMY PUBLICATIONS

- a. FM 21-15: Individual Clothing and Equipment. (April 1945). Emphasis is placed on the care of clothing and equipment and methods of assembling and packing.
- b. TM 10-228: Fitting of Shoes and Socks. (February 1946). The importance of proper shoe fitting methods, foot measuring equipment and procedure, sock fitting and size correlation, and size data for boots and shoes including approved sock combinations, are the more relevant sections of this manual.
- c. TB QM 13: Clothing Equipment and Rations for Use in the Jungle. (May 1944). Methods of use and care of specialized jungle items.
- d. FM 72-20: Jungle Warfare. (October 1944). Of special value are: Chapter 1, General Characteristics of the Jungle; Chapter 2, Health, Hygiene and Sanitation; Chapter 4, Jungle Operations; Appendix I, Native Plants; Appendix II, Use of Jungle Machete.
- e. FM 70-10: Mountain Operations. (December 1944). Chapter 1, General Considerations; Chapter 4, Conditioning and Acclimatization; and Chapter 6, Weather, discuss the relationship between the soldier and the mountain environment.
- f. Other Clothing Almanacs. Clothing Almanacs for regions adjoining Southeast Asia are:

- No. 16 South Central Asia
- No. 10 China and Korea
- No. 19 Indonesia and the Philippines

6. CLOTHING TABLES

Clothing requirements for Southeast Asia, already discussed in part are itemized in detail in the Clothing Requirements tables. They may be summarized in two groups, each suitable for wear at different average monthly temperatures:

- WARM Weather Clothing, above 68°F
- COOL Weather Clothing, 50 to 68°F

Lists of the clothing items making up each group are given in Tables IV and V. Table VI shows the months during which each of these groups of clothing items are suitable for wear in each Clothing Requirement Area, as shown on the map in the back of the Almanac. The items listed in these summary tables are those suitable for wear by troops of Class A, B, and C units (T/A 21, Mbl, part I, par. 2b), defined as those which habitually operate in the forward active combat zone, or in the service area of the combat zone, where housing usually is not provided; these troops must have

TABLE IV: WARM WEATHER CLOTHING FOR SOUTHEAST ASIA
(Average Monthly Temperatures above 68°F)

<u>Class A, B, and C Troops</u>	<u>Wear</u>	<u>Spare</u>
Jacket & Trousers, lightweight	1	1
Poncho, lightweight, od	1	-
Shirt, knit, od	1	-
Boots, combat, tropical, w/1 pr. socks, wool, cushion sole, 1 pr. insoles, ventilating	1	-
Cap, herringbone twill	1	-
Blanket, lightweight	1	-
<u>Class D and E Troops</u>		
Essentially the same as for A, B, and C Troops except for the following additions or substitutions:		
Raincoat (in lieu of Poncho)	1	-
Shirt & Trousers, cotton, khaki	1	2
Boots, service, combat, russet, w/1 pr. socks, wool, cushion sole	1	1
Boots, knee wader	1	-
Blanket, wool	1	-

TABLE V: COOL WEATHER CLOTHING FOR SOUTHEAST ASIA
(Average Monthly Temperatures
between 50 and 68°F)

<u>Class A, B, and C Troops</u>	<u>Wear</u>	<u>Spare</u>
Jacket, field, w/hood	1	-
Poncho, lightweight, od	1	-
Shirt, flannel, od & Trousers, field, wool, od	1	1
Trousers, field, cotton, od	1	-
Sweater, high neck	1	-
Boots, service, combat, russet, w/1 pr. socks, wool, cushion sole	1	4
Gloves, leather, w/2 pr. inserts, wool	1	-
Cap, herringbone twill	1	-
Bag, sleeping, wool	1	-
Case, water repellent, bag, sleeping	1	-
<u>Class D and E Troops</u>		
Essentially the same as for A, B, and C Troops except for the following additions or substitutions:		
Raincoat (in lieu of Poncho)	1	-
Jacket, wool, od	1	-

TABLE VI: CLOTHING REQUIREMENTS SUMMARY FOR SOUTHEAST ASIA

AREA (feet)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
I-A - - - - -						WARM						
II-A - - - - -						WARM						
I-1												
below 3,000						WARM						
above 3,000		COOL				WARM					COOL	
II-1												
below 3,500		COOL					WARM					COOL
3,500-6,000			COOL				WARM			COOL		
above 6,000						COOL						

clothing suitable for 24-hour living outdoors. In addition, these tables indicate possible deletions, additions, or substitutions of items for use by troops of Class D and E units, whose normal working and living conditions, at airfields and other permanent or semi-permanent installations where housing is provided, are not as rigorous.

The six Clothing Requirements tables for the four Clothing Requirement Areas of Southeast Asia are located in the back of the Almanac. Only one table is included for the two nonmountainous Areas (I-A and II-A) inasmuch as clothing needs for the two Areas are identical. Tables for the two mountainous Areas follow, with the tables for the lowest elevations coming first, then those for upper levels in ascending order.

Areas to which tables apply are shown in the map in the back cover. For most effective use of the tables, especially in selecting from them clothing items best suited to the individual location and months of the year, the preceding text may be consulted.

All listings in the Clothing Requirements tables, as well as the summary tables, are those authorized by T/A 21 (Mbl) at the time of preparation of this Almanac. Within a few months, however, several of these items gradually will be replaced in supply lines by items recently standardized. Table VII shows some replacements applicable to Southeast Asia.

TABLE VII: CLOTHING REPLACEMENT

(S means Standard;
L, Limited Standard;
B, Substitute Standard)

ITEMS IN CLOTHING ALMANAC

REPLACEMENT ITEMS

Shirt, flannel, od (B))	
Sweater, high neck (B))	Shirt, field, wool, og 108 (S)
Jacket, field (L)	Jacket Shell, field, M-1951 (S)
w/hood, jacket & overcoat (L)	w/hood, jacket, M-1951 (S)
Trousers, field, cotton, od (L)	Trouser Shell, field, M-1951 (S)

Figure 8: Combat troops require more protection than natives, because they must move in and through the jungle with its tangle of vines and undergrowth. Protection is needed against abrasion, insects, poisonous reptiles and poisonous plants.



CLOTHING REQUIREMENTS

Southeast Asia I-A & II-A

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
* Jacket, field, w/hood, jacket & overcoat												
Jacket & Trousers, lightweight special												
Poncho, lightweight, od												
* Raincoat												
Shirt & Trousers, cotton, khaki												
Shirt, knit, od												
FOOTGEAR												
Boots, combat, tropical; w/1 pr. socks, wool, cushion sole; 1 pr. insoles, ventilating												
* Boots, service, combat, russet, OR Shoes, service; w/1 pr. socks, wool, cushion sole												
HANDGEAR												
None												
HEADGEAR												
Cap, herringbone twill												
* Helmet, sun												
SLEEPING EQUIPMENT												
Blanket, lightweight												
Blanket, wool, od												
OTHER ITEMS												
Anti-insect (See Introduction)												

— Item usually required in this month

1 5/25/50

* Item usually required in indicated months, but must be procured specially because "discretionary" in this zone.

CLOTHING REQUIREMENTS

Southeast Asia I-1 (below 3,000ft.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
* Jacket, field, w/hood, jacket & overcoat.												
Jacket & Trousers, lightweight special.												
Poncho, lightweight, od.												
* Raincoat.												
Shirt & Trousers, cotton, khaki.												
Shirt, knit, od.												
FOOTGEAR												
Boots, combat, tropical; w/1 pr. socks, wool, cushion sole; 1 pr. insoles, ventilating.												
* Boots, service, combat, russet, OR Shoes, service; w/1 pr. socks, wool, cushion sole.												
HANDGEAR												
None												
HEADGEAR												
Cap, herringbone twill.												
* Helmet, sun.												
SLEEPING EQUIPMENT												
Blanket, lightweight.												
Blanket, wool, od.												
OTHER ITEMS												
Anti-insect (See Introduction).												

— Item usually required in this month

* Item usually required in indicated months, but must be procured specially because "discretionary" in this zone.

1 5/25/50

CLOTHING REQUIREMENTS

Southeast Asia I-1 (above 3,000 ft.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
Jacket, field, w/hood, jacket & overcoat.												
* Jacket, wool, od												
Jacket & Trousers, lightweight special.												
Poncho, lightweight, od.												
* Raincoat												
Shirt & Trousers, cotton, khaki.												
* Shirt, flannel, od, & Trousers, field, wool, od												
* Shirt, knit, od.												
* Sweater, high neck												
* Trousers, field, cotton, od												
* Undershirt & Drawers, winter.												
FOOTGEAR												
* Boots, combat, tropical; w/1 pr. socks, wool, cushion sole; 1 pr. insoles, ventilating												
* Boots, knee wader.												
Boots, service, combat, russet, OR Shoes, service; w/1 pr. socks, wool, cushion sole												
HANDGEAR												
None												
HEADGEAR												
Cap, herringbone twill												
* Helmet, sun												
SLEEPING EQUIPMENT												
* Blanket, lightweight.												
Blanket, wool, od.												
OTHER ITEM												
Anti-insect (See Introduction).												

- Item usually required in this month
 * Item usually required in indicated months, but must be procured specially because "discretionary" in this zone.

11 5/25/50

CLOTHING REQUIREMENTS

Southeast Asia II-1 (below 3,500ft.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
Jacket, field, w/hood, jacket & overcoat.												
* Jacket, wool, od.												
Jacket & Trousers, lightweight special.												
Poncho, lightweight, od.												
* Raincoat.												
Shirt & Trousers, cotton, khaki.												
* Shirt, flannel, od, & Trousers, field, wool, od.												
* Shirt, knit, od.												
* Sweater, high neck.												
* Trousers, field, cotton, od.												
* Undershirt & Drawers, winter.												
FOOTGEAR												
* Boots, combat, tropical; w/1 pr. socks, wool, cushion sole; 1 pr. insoles, ventilating.												
* Boots, knee wader.												
Boots, service, combat, russet, OR Shoes, service; w/1 pr. socks, wool, cushion sole.												
HANDGEAR												
None												
HEADGEAR												
Cap, herringbone twill.												
* Helmet, sun.												
SLEEPING EQUIPMENT												
* Blanket, lightweight.												
Blanket, wool, od.												
OTHER ITEM												
Anti-insect (See Introduction).												

- Item usually required in this month
 * Item usually required in indicated months, but must be procured specially because "discretionary" in this zone.

II 5/25/50

CLOTHING REQUIREMENTS

Southeast Asia II-1 (3,500 - 6,000ft.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
Jacket, field, w/hood, jacket & overcoat												
Jacket, wool, od												
Jacket & Trousers, herringbone twill												
Overcoat, wool, od												
* Parka & Trousers, field, overwhite												
* Parka & Trousers, wet weather												
Poncho, lightweight, od												
* Raincoat												
Shirt & Trousers, cotton, khaki												
Shirt, flannel, od, & Trousers, field, wool, od												
* Shirt, knit, od												
Sweater, high neck												
Trousers, field, cotton, od												
Undershirt & Drawers, winter												
FOOTGEAR												
* Boots, combat, tropical; w/lpr. socks, wool, cushion sole; lpr. insoles, ventilating												
* Boots, knee wader												
Boots, service, combat, russet, OR Shoes, service; w/lpr. socks, wool, cushion sole												
* Shoe-pacs, 12 in., w/2pr. socks, wool, ski; lpr. insoles, felt												
HANDGEAR												
Glove-shells, leather, w/2pr. inserts, wool												
Mittens, overwhite												
HEADGEAR												
Cap, field, cotton, od, w/visor												
* Cap, herringbone twill												
* Helmet, sun												
* Muffler, wool, od												
SLEEPING EQUIPMENT												
* Bag, sleeping, mountain												
* Bag, sleeping, wool												
* Blanket, wool, od												
* Case, water repellent, bag, sleeping												
OTHER ITEMS												
* Anti-insect (See Introduction)												

— Item usually required in this month

* Item usually required in indicated months, but must be procured specially because "discretionary" in this zone

III 5/25/50

CLOTHING REQUIREMENTS

Southeast Asia II-1 (above 6,000ft.)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BODY CLOTHING												
Jacket, field, w/hood, jacket & overcoat												
Jacket, wool, od.												
Jacket & Trousers, herringbone twill.												
Overcoat, wool, od.												
* Parka & Trousers, field, overwhite												
* Parka & Trousers, wet weather.												
Poncho, lightweight, od.												
* Raincoat.												
Shirt & Trousers, cotton, khaki												
Shirt, flannel, od, & Trousers, field, wool, od.												
* Shirt, knit, od.												
Sweater, high neck.												
Trousers, field, cotton, od.												
Undershirt & Drawers, winter.												
FOOTGEAR												
* Boots, combat, tropical; w/1pr. socks, wool, cushion sole; 1pr. insoles, ventilating												
* Boots, knee wader												
Boots, service, combat, russet, OR Shoes, service; w/1pr. socks, wool, cushion sole.												
* Shoepace, 12 in., w/2pr. socks, wool, ski; 1pr. insoles, felt.												
HANDGEAR												
Glove-shells, leather, w/2pr. inserts, wool.												
* Mittens, overwhite												
HEADGEAR												
Cap, field, cotton, od, w/visor.												
* Cap, herringbone twill.												
* Helmet, sun.												
* Muffler, wool, od.												
SLEEPING EQUIPMENT												
* Bag, sleeping, mountain.												
* Bag, sleeping, wool.												
* Blanket, wool, od.												
* Case, water repellent, bag, sleeping.												
OTHER ITEMS												
* Anti-insect (See Introduction).												

- Item usually required in this month
- * Item usually required in indicated months, but must be procured specially because "discretionary" in this zone

III 5/25/60

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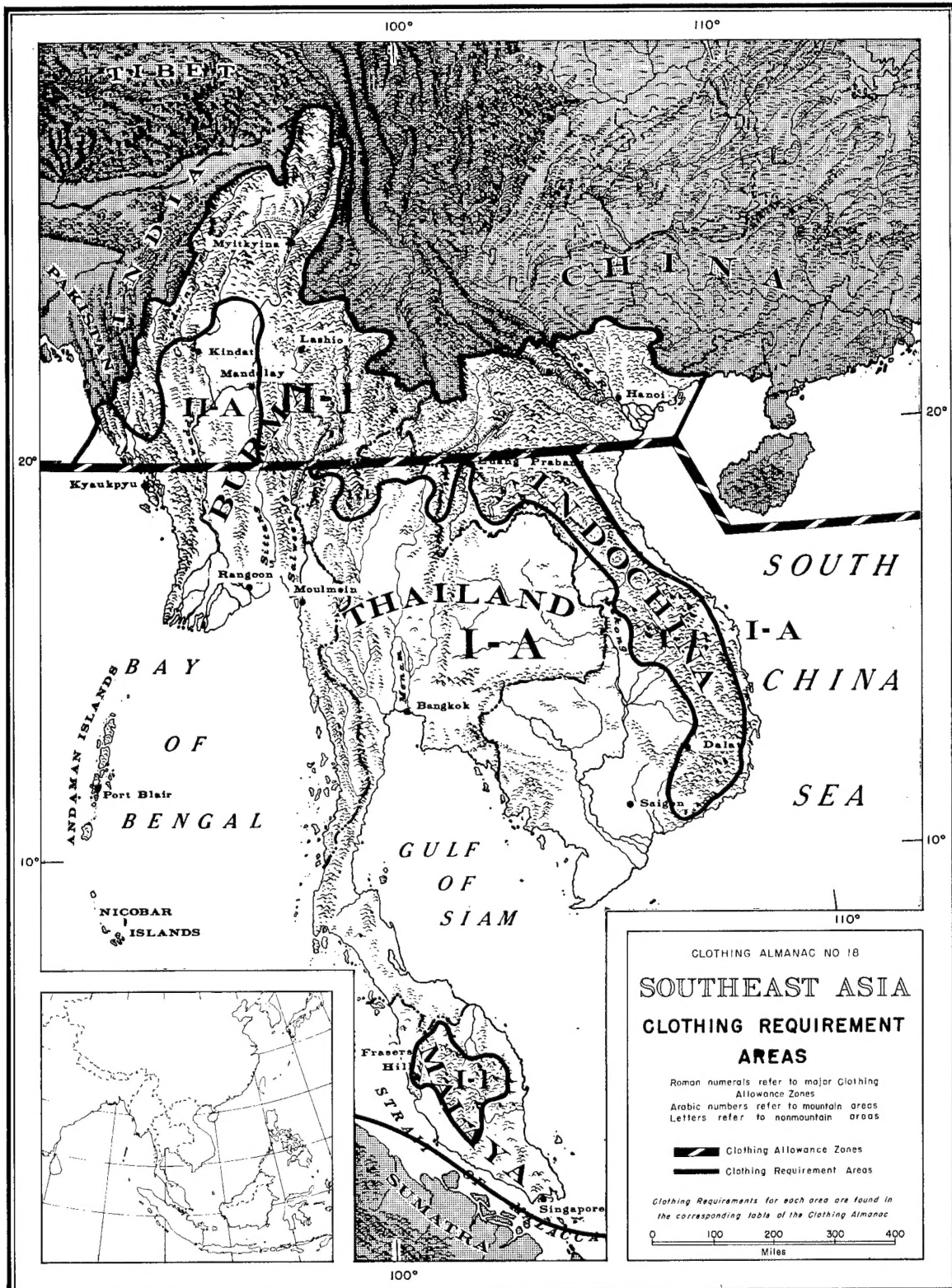
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